

REMARKS

Claims 1-8 and 10-24 are pending in the application, are rejected, and are at issue.

By this Amendment, independent claims 1 and 24 are amended to more particularly define the invention.

Applicants traverse the rejection of claims 1-3, 13, 14, 17-19 and 24 as anticipated or obvious over Williams WO 01/45830.

Independent claim 1 specifies a method of preparing particles of a defined size, the method comprising: providing a reaction vessel having a first reactant space and a second reactant space, the spaces being separated by a contactor; introducing a first liquid reactant in the first reactant space; introducing a second liquid reactant in the second reactant space; rotating the reaction vessel so that the first reactant space is radially inside and the second reactant space is radially outside; forming first reactant droplets when the first reactant passes the contactor under influence of a centrifugal force caused by the rotating of the reaction vessel; transporting the droplets of the first reactant to the second reactant in the second reactant space under influence of the centrifugal force; forming a in the form of particles when the first reactant has been brought into contact with the second reactant, the reaction product having a density that is greater than that of the second reactant; and transporting the reaction product particles to a radially outward end of the second reactant space due to centrifugal forces.

Williams discloses a method of controlling dispersion of two immiscible phases for use in the manufacture of an emulsion or particulate suspension product. Williams uses a rotating membrane in a space of which one of the phases is introduced. The rotating membrane extends along a longitudinal axis of a cylindrical reaction vessel. The membrane is rotated about the

longitudinal axis. This configuration is essential to the method disclosed in Williams as it is the rotational force that is responsible for dispersing the phase initially residing inside the membrane into the phase inside the non-rotating reaction vessel.

There are numerous differences between Williams and the invention defined by claim 1.

Claim 1 defines a method for preparing particles of a defined size and morphology using a chemical reaction of reactants. This is different from a method for the dispersion of one phase into another as in Williams. Secondly, the contactor used in the method of claim 1 extends so relative to the axis of rotation of the reaction vessel that the first reactant space is radially inside and the second reactant space is radially outside. Under influence of the centrifugal force, the second reactant is not in contact with the contactor, so that no reaction takes place at the contactor. Consequently the contactor is not contaminated with solid particles.

With the invention defined by claim 1, the rotational force is employed to separate the particles from the second reactant. This operation of separation of the reaction product from the reaction zone relies upon the fact that the reaction product is subject to a centrifugal force. To accomplish this, the present application features a method in which the whole reaction vessel, including both reactants, the media in which they reside (e.g., air or gas), and the contactor, is rotated. This is distinct from just the membrane including one phase as in Williams. As a result, the size distribution and shape of the particles thus formed can be controlled. This effect is neither described nor suggested or contemplated by Williams or any of the other prior art.

For the above reasons, Williams does not anticipate or render obvious claim 1 or any of dependent claims 2, 3, 13, 14 or 17-19.

Independent claim 24 specifies a device comprising a reaction vessel including a contactor that separates a first reactant space for holding a first liquid reactant and a second reactant space for holding a second liquid reactant. The reaction vessel is rotatable mounted so that, when the reaction vessel rotates, the first reaction space is radially inside and the second reactant space is radially outside. The contactor is configured for forming first reactant droplets when the first reactant passes the contactor under influence of a centrifugal force caused by the rotating of the reaction vessel.

Williams does not anticipate or render claim 24 obvious for similar reasoning as applied above relative to independent claim 1.

For the above reasons, claims 1-3, 13, 14, 17-19 and 24 are believed allowable and withdrawal of the rejection is requested.

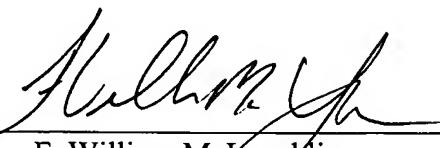
Applicants traverse the rejection of claims 4-8, 10-12, 15, 16 and 20-23 as obvious over Williams.

Each of these claims depends from independent claim 1, discussed above. As noted above, independent claim 1 is not obvious over Williams. Therefore, as a matter of law, claims 4-8, 10-12, 15, 16 and 20-23 are likewise not obvious and withdrawal of the rejection is requested.

Reconsideration of the application and allowance and passage to issue are requested.

Respectfully submitted,

By:


F. William McLaughlin

Reg. No. 32,273

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Wood, Phillips, Katz, Clark & Mortimer
Citigroup Center - Suite 3800
500 West Madison Street
Chicago, Illinois 60661
Telephone: (312) 876-1800
Facsimile: (312) 876-2020